State of Washington

Department of Labor and Industries
2006 Supplemental Decision Package

Decision Package Code/Title	94	Providing Electrical Inspections in 24 Hours
Budget Period	**2005-07**	**2006 Supplemental Budget**
Budget Level	**M1**	**Maintenance Level**

Recommendation Summary Text

Eight electrical inspector FTEs are requested to meet a significant increased workload demand and provide inspections within 24 hours of a request. Since Fiscal Year 2001, the number of inspections requested per day has increased 36 percent. With this increase, the number of inspections performed within 24 hours of customer request has decreased to a level that is unacceptable to electrical program stakeholders. Contractors often incur substantial costs when projects are delayed because inspections do not occur on time. While the program has become more efficient in order to absorb the significant increase in workload since 2001, the program has not added new FTEs.

Fiscal Detail:

	FY 2006	FY 2007	TOTAL
Staffing (B6):			
095-1 Electrical Fund-State	0.0	8.0	4.0
	0.0	0.0	0.0
TOTAL FTEs	**0.0**	**8.0**	**4.0**

	FY 2006	FY 2007	TOTAL
Operating Expenditures:			
095-1 Electrical Fund-State	0	871,927	871,927
609-1 Medical Aid Fund-State	0	0	0
TOTAL Expenditures	**0**	**871,927**	**871,927**

	FY 2006	FY 2007	TOTAL
Revenue (B9):			
Fund/Major Group/Source	0	0	0
TOTAL Revenue	**0**	**0**	**0**

Package Description:

Background

Currently, the electrical program focuses efforts on meeting its public safety mandate by ensuring qualified individuals conduct electrical work through licensing, providing enforcement by citing those who are performing work illegally, and by inspecting electrical installations in residential, commercial and industrial sites. While Chapter 19.28 RCW sets forth a requirement that all installations shall be

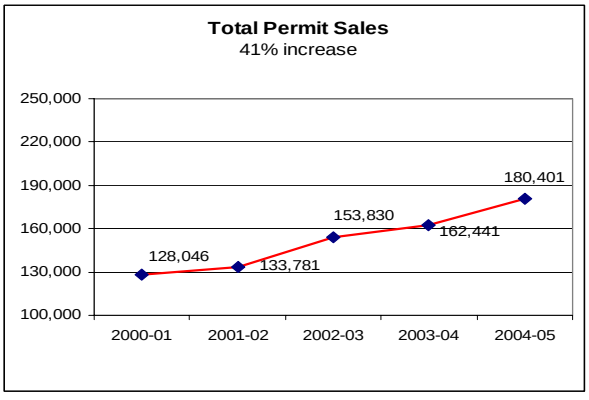
inspected within 48 hours of the inspection request, the Electrical Board, customers and stakeholders have been very clear in public forums, surveys and throughout the stakeholder process that they expect the program to maintain a 24-hour turnaround on at least 89 percent of inspections.

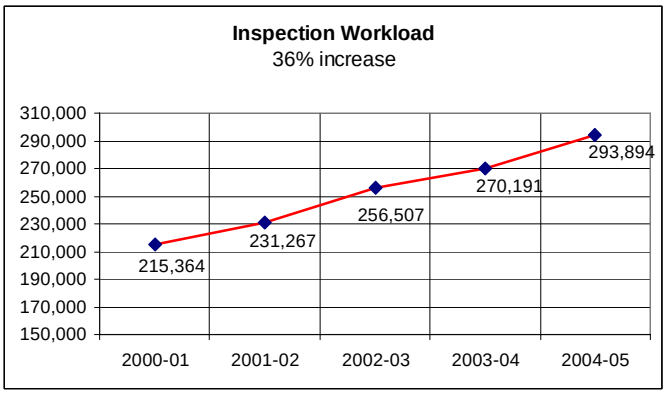
Problem

In the last five fiscal years, as workload steadily increased, the program's ability to respond to customers' expectations began to decrease. Currently only 82 percent of all installations are inspected within 24 hours after a request from the customer. Approximately 20,500 inspections do not occur within the 24-hours that customers expect. These delays are often quite costly to contractors, who have scheduled work crews to show under the expectation that the inspections will occur on time. The program's on-time response to inspections has decreased due to several factors:

- Since Fiscal Year 2001, the program has faced a 36 percent demand for inspection services, rising from 215,364 inspections in Fiscal Year 2001 to 293,894 inspections in Fiscal Year 2005. This workload growth is primarily attributable to new home construction and other projects tied to low interest rates and economic growth.
- Since Fiscal Year 2001 the department has not increased staffing resources while electrical permit sales have increased 41 percent from 128,048 to 180,401.
- The current workload forces inspectors to conduct more than the optimal 10.3 inspections per day. This affects inspection quality and causes ineffective scheduling of inspections that prompts some inspections to be delayed past the 24 hour threshold. The optimum figure of 10.3 inspections per day is based on multiple years of inspection data that concludes this level of productivity is consistent with a 24hour inspection rate of 89 percent.

	Fiscal Year 2001	Fiscal Year 2005	% Change
Inspections	215,364	293,894	36%
Electrical Permit sales	128,046	180,401	41%
Percent of Inspections completed in 24 hrs	90%	82%	(8%)





The electrical program has implemented several work process efficiencies in order to absorb the extra workload from the past growth. Efficiency practices statewide have recovered valuable time, even in small amounts, to allow inspectors to have more inspection time:

- **Class B:** In 2003, the Legislature passed ESSB 5713 (Chapter 399, Laws of 2003) that allowed the electrical program to make random, rather than mandatory, inspections of certain types of low voltage electrical installations with minimal safety risk hazards. Examples include: thermostats, audio, intercoms and security systems. Placing inspections in this category, called "Class B" inspections, reduces the workload of inspectors because they are no longer required to perform inspections on all of those items. The program is currently moving low voltage thermostats into the Class B category, a shift that will create inspection capacity equivalent to four FTEs.
- **Mapping:** Used mapping technology to improve routing of inspector's daily itinerary which saves time and increases capacity.
- **Rotate inspectors** directly to the field so that:
  - Inspectors get out of the office earlier which allows more time for inspections.
  - Some inspectors work from home and go directly to inspections instead of first coming into the office.
- **Reduce phone time**
  - Some inspectors are identified to not answer phones
  - All phone calls go directly to the lead inspector
- **Other efficiencies**
  - Double-up inspectors in heavy areas
  - One person per week does only compliance work – randomly stopping at construction job sites to check on the licensing of any electrical workers on site.
  - Use lead inspector to relieve inspector workload

These efficiency measures have allowed the program to absorb significant workload increases in the past four years. The program now estimates that it has stretched resources and possible efficiency gains to the maximum level, and efficiency measures will not suffice to meet the current performance shortfall. Therefore, L&I still needs additional staff to handle workload and customer demands and increase the inspection response rate to the level expected by customers.

The inspection workload has increased every year since 2001 by at least five percent, ranging up to 11 percent growth in 2004. The program conservatively estimates that the inspection workload in the 2005-2007 Biennium will increase by at least 2.5 percent, which is 7,347 additional inspections.

Proposed Solution
L&I is requesting funding for eight additional inspector FTEs to meet this workload demand.

An inability to successfully respond to this growing workload in a timely manner has a significant impact on public safety, as potential exposures to electrical hazards extend beyond the 24-hour threshold. In combination with the capacity equivalent to four FTEs gained through pending Class B rule changes, the eight additional positions will increase the percentage of inspections performed within 24 hours to 89 percent.

This decision package conservatively assumes a 2.5 percent growth in workload. In order to help manage growth in the electrical inspection workload beyond this amount, the program will continue to implement efficiency measures like those listed above to manage any workload growth in the coming years, maintaining the 24 hour response rate at 89 percent. Additionally, expanded Class B definitions will be considered in the future. These long term changes will give the efficiencies needed to deal with expected work load growth in the future so that the program does not have to ask for more FTEs -- at least for a couple of biennia. The electrical fund has sufficient capacity to handle the long term and short term costs of this decision package.

Without additional inspector FTEs, the customers of the electrical program will continue to experience what they perceive to be an unacceptable level of service from inspectors, incurring more costly delays and uncertainties about inspection timelines.

Narrative Justification and Impact Statement

How this Decision Package contributes to agency's strategic plans and activities

This budget request supports Priorities of Government (POG) Result #8: Improve the safety of people and property. The Electrical Program protects the people of the state from the inherent dangers associated with electrical work by providing a baseline of public safety in electrical installations by inspecting electrical wiring and installations in industrial, commercial, institutional (schools) and residential construction.

Performance Measure Detail:
Goal(s) to which this change is tied:

Promote public safety by inspecting electrical work, elevators, boilers and factory-built structures and by making sure safety codes and requirements are met.

	Incremental Changes	
Performance Measure Changes:	**Fiscal Year 2006**	**Fiscal Year 2007**
Outcome Measures:		
Output Measures:		
1. Percent of electrical inspections completed in 24 hours		7%

Efficiency Measures:

Statement of Expected Results:

Percent of electrical inspections completed in 24 hours - 89 %

Reason for change

Electrical inspections provide a vital assurance of public safety, and the quality of inspections is compromised when inspectors are pushed to complete them quickly.

The percent of electrical inspections completed within 24 hours, has fallen to 82 percent. This package, in combination with additional efficiencies implemented by the electrical program, would allow the 24 hour performance to rise to 89 percent.

Impact of the change on clients and services

Customers of the electrical program have a strong expectation of "next day service" in most instances. As the percentage performed within 24 hours has dropped from 89 percent to 82 percent, 20,500 customers per year are not receiving their inspection within 24 hours. This budget package will raise performance to meet the expectations and needs of customers.

Other impacted programs/divisions/regions

None

Relationship to capital budget

None

Required changes to existing RCW, WAC, contract or plan

None

Alternatives explored by agency

One alternative discussed was to change from the current 24 hour goal to a 48 hour goal. Although the current staff could complete inspections within the statutory requirement, this would be strongly opposed by both the Electrical Board and by stakeholders. Many contractors rely on the quick inspection turnaround for the timely completion of their projects. Construction projects are often tightly scheduled, and a one day delay in an electrical inspection can often delay a project timeline

where subcontractors (e.g. drywall hangers and tapers, painters, etc.) are scheduled weeks in advance.

Budget impacts in future biennia

Future biennia cost will be the on-going cost of $1,599,374.

Distinction between one-time and on-going costs

All costs are on-going except equipment of $72,240

Effects of non-funding

If not funded, the program would still proceed with the Class B rule changes currently being processed. Supported by the Electrical Board they will be implemented in November 2005. This change would likely improve the percent of inspections completed within 24 hours a small amount, but not enough to meet the needs of stakeholders. If workload continues to grow, as it has for the past five years, even with the capacity created by the Class B rule changes, the percent of inspections performed in 24 hours may well continue to fall. To manage customer expectations, the program would likely need to involve stakeholders in a discussion to revise performance targets to reflect a more realistic goal, as well as looking at other potential options for managing growth or expanding the list of items in the Class B category.

Expenditure Calculations and Assumptions

The following calculations are based on an average inspector working 207 days per year performing 10.3 inspections per day. Two hundred and seven days is the number of days actually worked per inspector in Fiscal Year 2005 after accounting for vacations, sick leave, training, etc. To ensure maximum use of resources, quality inspections and safety of the inspectors 10.3 is the optimal number of inspections per day per inspector. Thus, an average inspector completes 2,132 inspections per year (207 x 10.3 = 2,132). Of those 2,132 inspections, 89 percent, or 1,897, will be inspected within 24 hours of the customer's request. (2,132 x .89 = 1,897)

In FY 2005 the electrical program customers expected 89 percent of the program's 293,894 inspections (which is 261,566) to be done within 24 hours. However, the program was only able to complete 82 percent of those 293,894 (which is 240,993) within 24 hours. The difference between those two service levels, 82 percent and 89 percent is 20,573 inspections. In order to perform these inspections the program would have needed an additional 11 inspector FTEs (20,573 ÷ 1,897 = 11).

For FY 2006 increased growth is conservatively projected at 2.5 percent, or 7,347 additional inspections, this is a total increase of 27,920. In order to perform these additional inspections within 24 hours, the program will need an additional 14 inspector FTEs.

20,573 + 7,347 = 27,920 inspections
27,920 divided by 1,897 (the number of inspections within 24 hrs) = 14 FTEs

Through efficiency gains from the proposed class B rule changes (see footnote at the end of this analysis), L&I expects to reduce the total number of inspections statewide by 8,528. This reduction would create workload capacity equivalent to adding four FTE. (2,132 x 4 = 8,528, see footnote for more details) As a result, L&I would need ten inspector FTEs to reach the 89 percent goal.

27,920 - 8,528 = 19,392 ÷ 1,897 = 10 FTEs

The department is requesting eight new FTEs. While the calculations shows that a request for ten FTEs would be justified, the program is committed to identify further opportunities for capacity, such as policy shifts that may allow special inspection exemptions for certain contractors. Considering and implementing policy shifts such as these will enable the program to meet its service deliver expectations if the eight inspectors identified in this packager are fully funded.

L&I Administration and IS Allocation

In addition to the direct costs estimates with this decision package, L&I included funding to cover agency wide indirect costs for the Administrative Services and Information Services programs. A rate of 1.9 percent in Fiscal Year 2007 and beyond is applied to cost estimates for FTEs and the standard costs associated with the addition of new FTEs, the exception being the cost of equipment purchases. These indirect rates for the Specialty Compliance Services program are based on the cost allocation methodology adopted by L&I in 2003 (with the funding realignment approved in the 2004 Supplemental budget and the adopted 2005-07 Budget) and the model update completed in July 2004.

Depending on the needs of the agency, activities covered by the indirect funding include the handling and processing of vendor payments and payroll; equipment purchase, delivery, inventory, storage and set-up; technical assistance to employees; desk-top and network support; internal IT systems support; contract administration; legislative services and public affairs; library; public disclosure; personnel and employee services; budget; accounting; facilities management; and other indirect support services functions.

Salaries for the proposed inspectors were estimated at a Range 58 Step G.

	FY 2006	FY 2007	TOTAL Biennium	Biennium 2007-2009	Biennium 2009-2011	TOTAL
FTEs	0.0	8.0	**4.0**	8.0	8.0	**6.7**
Objects of Expenditure:						
A - Salary and Wages	0	458,016	**458,016**	916,032	916,032	**2,290,080**
B - Employee Benefits	0	135,802	**135,802**	271,604	271,604	**679,010**
C - Personal Service Contracts	0	0	**0**	0	0	**0**
E - Goods and Services	0	126,749	**126,749**	253,498	253,498	**633,745**
G - Travel	0	79,120	**79,120**	158,240	158,240	**395,600**
J - Capital Outlays	0	72,240	**72,240**	0	0	**72,240**
TOTAL Expenditures	**0**	**871,927**	**871,927**	**1,599,374**	**1,599,374**	**4,070,675**
Funds:						
001-General Fund	0	0	**0**	0	0	**0**
02V-PSEA	0	0	**0**	0	0	**0**
095 Electrical	0	871,927	**871,927**	1,599,374	1,599,374	**4,070,675**
608 Accident Account	0	0	**0**	0	0	**0**
609 Medical Aid Account	0	0	**0**	0	0	**0**
Other (specify fund code)	0	0	**0**	0	0	**0**
TOTAL Funds	**0**	**871,927**	**871,927**	**1,599,374**	**1,599,374**	**4,070,675**

Footnote:

Explaining the Class B changes: Through rule changes that are supported by the Electrical Board and that will be implemented in November 2005, a number of inspections of low voltage, lower-risk electrical connections that currently have mandatory inspections will be moved into the "random inspection" category.

These low voltage inspections include thermostats, audio, intercoms, security systems, and other low voltage systems, which take significantly less time per inspection than a standard electrical inspection. (It does not include fire alarms, nurse calls, lighting control or telecommunications, which interact with high voltage systems.) The electrical program estimates that up to 38,000 (based on Fiscal Year 2004 low voltage permit sales) of these inspections could be removed from the inspection workload each year. This change will save approximately 5,382 hours of inspector time, which translates into 8,528 standard inspections.

One inspector x 207 days x 10.3 inspections = 2,132 inspections per year
One inspector x 6.5 hours x 207 days = 1,345 inspection hours
(6.5 hours = the optimal time in the field for inspectors who go to the office each day.)

Class B = 38,000 inspections = 5,382 hours
5,382 hours ÷ 6.5 hours per day = 828 inspector days

828 inspector days x 10.3 inspections per day = 8,528 standard electrical inspections
8,528 standard electrical inspections = 38,000 low voltage inspections

8,528 inspections ÷ 2,132 (1 inspector) = 4 inspectors